

Claims

What is claimed is:

1. A method for transferring data between computer systems, comprising the steps of:
 - (a) transmitting data packages from a plurality of data sources in a first computer network to a first gateway;
 - (b) transmitting the data packages from the first gateway to a second gateway;
 - (c) transmitting the data packages from the second gateway to a plurality of data destinations in a second computer network;
 - (d) transmitting acknowledgement messages from the data destinations to the second gateway;
 - (e) generating pause messages at the second gateway based at least in part on the reception of acknowledgement messages by the second gateway; and
 - (f) transmitting the pause messages from the second gateway to the first gateway.
2. The method of claim 1 where the first gateway includes a mailbox and an output task, the data packages are transmitted to the mailbox in step (a), and the output task is capable of retrieving data packages stored in the mailbox.
3. The method of claim 1 further comprising the step of:
 - (g) transmitting the pause messages from the first gateway to the plurality of data sources.
4. The method of claim 1 where step (a) is performed by a plurality of sending tasks created by the data sources.
- 20 5. The method of claim 1 further comprising the steps of:
 - (g) adding sequence identifiers to the data packages in step (a);
 - (h) checking the sequence identifiers added in step (g) at the first gateway;
 - (i) adding sequence identifiers to the data packages in step (c); and
 - (j) checking the sequence identifiers added in step (i) at the data destinations.
- 25 6. The method of claim 1 where the first gateway includes an input task and an output task, the second gateway includes an input task and an output task, step (b) is performed by the output task of the first gateway, steps (c) and (e) are performed by the input task of the second gateway, and step (f)

comprises transmitting the pause messages from the output task of the second gateway to the input task of the first gateway.

7. The method of claim 1, further comprising the steps of:
 - (g) transmitting acknowledgement messages from the first gateway to the data sources; and
 - (h) counting the acknowledgement messages received at each data source.
8. The method of claim 1, further comprising the steps of:
 - (g) sending messages with data package transfer information from the data sources to the first gateway;
 - (h) sending a message with the data package transfer information from the first gateway to the second gateway;
 - (i) sending messages with the data package transfer information from the second gateway to the data destinations; and
 - (j) checking the data package transfer information at the data destinations.
9. A computer program, stored on a tangible storage medium, for transferring data between computer systems, the program including executable instructions that cause one or more computers to:
 - (a) transmit data packages from a plurality of data sources in a first computer network to a first gateway;
 - (b) transmit the data packages from the first gateway to a second gateway;
 - (c) transmit the data packages from the second gateway to a plurality of data destinations in a second computer network;
 - (d) transmit acknowledgement messages from the data destinations to the second gateway;
 - (e) generate pause messages at the second gateway based at least in part on the reception of acknowledgement messages by the second gateway; and
 - (f) transmit the pause messages from the second gateway to the first gateway.
10. The computer program of claim 9 where the first gateway includes a mailbox and an output task, the data packages are transmitted to the mailbox in step (a), and the output task is capable of retrieving data packages stored in the mailbox.

11. The computer program of claim 9 where the executable instructions further cause the one or more computers to:

(g) transmit the pause messages from the first gateway to the plurality of data sources.

12. The computer program of claim 9 where step (a) is performed by a plurality of sending tasks
5 created by the data sources.

13. The computer program of claim 9 where the executable instructions further cause the one or more computers to:

(g) add sequence identifiers to the data packages in step (a);

(h) check the sequence identifiers added in step (g) at the first gateway;

10 (i) add sequence identifiers to the data packages in step (c); and

(j) check the sequence identifiers added in step (i) at the data destinations.

14. The computer program of claim 9 where the first gateway includes an input task and an output task, the second gateway includes an input task and an output task, step (b) is performed by the output task of the first gateway, steps (c) and (e) are performed by the input task of the second gateway, and
15 step (f) comprises transmitting the pause messages from the output task of the second gateway to the input task of the first gateway.

15. The computer program of claim 9 where the executable instructions further cause the one or more computers to:

(g) transmit acknowledgement messages from the first gateway to the data sources; and

20 (h) count the acknowledgement messages received at each data source.

16. The computer program of claim 9 where the executable instructions further cause the one or more computers to:

(g) send messages with data package transfer information from the data sources to the first gateway;

25 (h) send a message with the data package transfer information from the first gateway to the second gateway;

(i) send messages with the data package transfer information from the second gateway to the data destinations; and

(j) check the data package transfer information at the data destinations.

17. A system for storing and transferring data , the system comprising:
a plurality of data sources;
a first gateway coupled to the data sources;
a second gateway coupled to the first gateway; and
a plurality of data destinations coupled to the second gateway;
- 5 where:
- (a) data packages are transmitted from the plurality of data sources to the first gateway;
- (b) the data packages are transmitted from the first gateway to the second gateway;
- (c) the data packages are transmitted from the second gateway to the plurality of data
10 destinations;
- (d) acknowledgement messages are transmitted from the data destinations to the second
gateway;
- (e) pause messages are generated at the second gateway based at least in part on the reception
of the acknowledgement messages by the second gateway; and
- 15 (f) the pause messages are transmitted from the second gateway to the first gateway.
18. The system of claim 17 where the first gateway includes a mailbox and an output task, the data packages are transmitted to the mailbox in step (a), and the output task is capable of retrieving data packages stored in the mailbox.
19. The system of claim 17 where:
- 20 (g) the pause messages are transmitted from the first gateway to the plurality of data sources.
20. The system of claim 17 where step (a) is performed by a plurality of sending tasks created by the data sources.
21. The system of claim 17 where:
- (g) sequence identifiers are added to the data packages in step (a);
25 (h) the sequence identifiers added in step (g) are checked at the first gateway;
(i) sequence identifiers are added to the data packages in step (c); and
(j) the sequence identifiers added in step (i) are checked at the data destinations.
22. The system of claim 17 where the first gateway includes an input task and an output task, the second gateway includes an input task and an output task, step (b) is performed by the output task of

the first gateway, steps (c) and (e) are performed by the input task of the second gateway, and step (f) comprises transmitting the pause messages from the output task of the second gateway to the input task of the first gateway.

23. The system of claim 17 where:

- 5 (g) acknowledgement messages are transmitted from the first gateway to the data sources; and
 (h) the acknowledgement messages received at each data source are counted.

24. The system of claim 17 where:

- (g) messages with data package transfer information are sent from the data sources to the first gateway;
- 10 (h) a message with the data package transfer information is sent from the first gateway to the second gateway;
- (i) messages with the data package transfer information are sent from the second gateway to the data destinations; and
- (j) the data package transfer information is checked at the data destinations.